

REMARKS

Claims 2-79 have been rejected under 35 U.S.C. § 121 and are subject to a restriction requirement. Claims 2-35 have been canceled thus claims 36-79, in Group I, are drawn to a stent delivery instrument. Applicant elects Group I, claims 36-79, for prosecution.

The drawings have been objected to as failing to comply with 37 C.F.R. § 1.84(p)(5) because the reference numbers 58-61 are not mentioned in the description. Upon notice of allowance, Applicants will amend the drawings to delete reference number 58-61.

The Abstract has been rewritten in narrative form as requested by the Examiner.

The reference in the specification to patents that may be listed on the Information Disclosure Statement are informative of different types of catheters and will remain in the application.

Various objections made relating to claims 2-36, now canceled, are moot.

On page 3 of the Office action, Examiner states that claims 47, 56, 69 and 78 are duplicates of claims 38, 46, 59 and 67, respectively. Applicant has reviewed all of the independent claims pending in the application, and none of the independent claims are duplicative. Accordingly, no amendments are believed necessary.

The specification was objected to as being inaccurate in that the slit 19 extends to a location "just proximal to the distal port 17," since FIGS. 1 and 2 show the slit running all the way to port 17. Examiner is correct and the specification has been amended to conform with FIGS. 1 and 2.

The Examiner has requested that all of the subject matter deleted by the Preliminary amendment filed May 14, 1999 should be reinstated to avoid new matter and lack of disclosure problems. The claims of the application are fully supported by the disclosure and

C

drawings which have been carried forward in each application in the chain dating back to U.S. Serial No. 07/647,464, filed January 28, 1991. The deleted subject matter relates to a nose cone which is not part of the claimed invention. Thus, no new matter is presented and the claims are supported by the specification.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current Response. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

It is believed that the pending claims are now in condition for allowance and it is respectfully requested that the application be considered at the earliest convenience. The undersigned attorney can be reached at (310) 824-5555 to facilitate prosecution of the application and to resolve any minor issues.

Respectfully submitted,

FULWIDER PATTON LEE & UTECHT, LLP

By: John S. Nagy
John S. Nagy
Registration No. 30,664

JSN:jeb
Enclosure

6060 Center Drive, Tenth Floor
Los Angeles, California 90045
Telephone: (310) 824-5555

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

Please enter the following substitute paragraph from the specification at page 1,
line 5:

This application is a divisional of U.S. Serial No. 09/119,344 filed July 20, 1998,
now U.S. Patent No. 6,113,607, which is a divisional of U.S. Serial No. 08/630,528 filed
April 10, 1996, now U.S. Patent No. 5,782,855, which is a divisional of U.S. Serial No.
08/085,959 filed July 6, 1993, now U.S. Patent No. 5,507,768, which is a continuation-in-part
application of U.S. Serial No. 07/647,464 filed January 28, 1991, now abandoned.

Please enter the following substitute paragraph from the specification at page 3,
line 25:

Another method and system[s] involves disposing a compressed or otherwise
small diameter stent about an expandable member such as a balloon on the distal end of a
catheter, advancing the catheter through the patient's vascular system until the [sent] stent is in
the desired location within a blood vessel and then expanding the expandable member on the
catheter to expand the stent within the blood vessel. The expanded expandable member is then
contracted and the catheter withdrawn, leaving the expanded stent within the blood vessel,
holding open the passageway thereof.

Please enter the following substitute paragraph from the specification at page 9,
line 13:

The delivery sheath 10 has a distal port 17 in its distal end which is in fluid
communication with the outer lumen 11 and a proximal port 18 disposed proximally to the distal
port. The distal portion of delivery sheath 10 tapers down in a spherical-like manner so that the

cross-sectional area is somewhat less in the distal region than the cross-sectional area of the rest of the delivery sheath. A slit 19 extends from the proximal port 18 to [a location just proximal to] the distal port 17. In one embodiment, a plurality of slits 59 in the wall of sheath 10 extend a short distance from the distal port 17. As contemplated, the slits 59 would facilitate in the relative axial position adjustment of the sheath 10 and intravascular catheter 12.

IN THE CLAIMS

69. An intravascular stent delivery assembly, comprising:
- a. a catheter having
 - i. a proximal end and a distal end;
 - ii. a distal guide wire port at the distal end;
 - iii. a proximal guide wire port spaced a relatively short distance from the distal end and a relatively long distance from the proximal end;
 - iv. a passageway for a guide wire extending between the distal guide wire port and the proximal guide wire port;
 - v. a long relatively stiff proximal section;
 - vi. a short relatively flexible distal section; and
 - vii. an expandable member for expanding a [sent] stent; and
 - b. a longitudinally flexible and expandable stent disposed about the expandable member of the catheter, the stent comprising a plurality of cylindrical elements which are independently expandable in the radial direction and which are interconnected so as to be generally aligned on a common longitudinal axis.

IN THE ABSTRACT

[The invention is directed to a stent delivery method and system which generally includes an elongated delivery sheath and a catheter disposed within an outer lumen of the sheath having an expandable member on its distal extremity. an expandable stent is mounted on the expandable member of the catheter. The distal portion of the sheath tapers down and is tucked within an elastic cone during transport of the stent to a stenotic region. A manipulating device is provided on the proximal end of the delivery system to effect relative axial movement between the sheath and the catheter so as to expose the stent mounted on the expandable member on the catheter within a body lumen such as a coronary artery and allow the expansion of the stent by the expansion of the expandable member. the elastic cone thereby disengages from the sheath and collapses about the distal end of the catheter. The delivery sheath has a first port in its distal end and a second port in the sheath wall proximally disposed from the distal end of the sheath. The catheter likewise has a first port in its distal end and a second port proximally disposed from the distal end of the catheter. An inner lumen extends within the distal portion of the catheter between the first and second ports and slidably receives a guiding member such as a guidewire. This system allows the stent to be delivered over a guidewire previously advanced to the desired location within a body lumen.]

A stent delivery assembly includes a catheter for carrying an intravascular stent for use in a body lumen. The catheter assembly includes a rapid exchange feature in which a proximal port is spaced a relatively short distance from the distal end of the catheter and a relatively long distance from the proximal end of the catheter. A stent is mounted on the expandable member or balloon portion of the catheter.